Journal of Islamic Thought and Civilization (JITC)
Volume 12 Issue 2, Fall 2022
ISSN$_{(P)}$: 2075-0943 ISSN$_{(E)}$: 2520-0313
Homepage: https://journals.umt.edu.pk/index.php/JITC

Article QR

Title:	**Where Technology Meets Islam: Towards an Islamic Perspective on Technology**
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DOI:	https://doi.org/10.32350/jitc.122.02
History:	Received: April 15, 2022, Revised: July 18, 2022, Accepted: September 07, 2022, Available Online: December 25, 2022
Citation:	Arzroomchila, Ehsan, and Maryam Olamaiekopaie. "Where technology meets Islam: towards an Islamic perspective on technology." *Journal of Islamic Thought and Civilization* 12, no. 2 (2022): 14−27. https://doi.org/10.32350/jitc.122.02
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Conflict of Interest:	Author(s) declared no conflict of interest

A publication of
Department of Islamic Thought and Civilization, School of Social Science and Humanities,
University of Management and Technology, Lahore, Pakistan

Where Technology Meets Islam: Towards an Islamic Perspective on Technology

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Abstract

Technology is a pervasive phenomenon in our surroundings. Today, we rarely experience the natural world and our relationship with the world is most often technologically mediated. The long-standing view in the Islamic world toward technology seems to be taking it as an innocent tool which carries only instrumental value. If so, there would not arise any moral question concerning technology per se. Rather, everything would concern with the way it is used by individuals. This *instrumentalist* approach, however, is notoriously premature. Technology inherently is value-laden and accordingly calls for philosophical as well as moral evaluation. In this article, we will suggest a context for assessing technology from an Islamic point of view. To that purpose, we will unpack Heidegger's account of technology to bring into relief an enduring problem associated with modern technology, the problem of *Gestell*. Our source of inspiration to accommodate Heidegger's concern is the work of Tabātabā'i, the contemporary Muslim thinker, on theory of *iʿtibārīat* and also his contribution to the virtue ethics. In the end we will find that, according to Tabātabā'i, the problem of technology is rooted in deviation from the golden mean, in the wake of secularization of the world in the modern era.

Keywords: Heidegger, Islamic Technology, Iʿtibārīat, Tabātabā'i, Technology, Virtue Ethics

Preliminaries

An implausible, yet pervasive, stance on technology is the belief that technology is neutral and therefore its associated values are fully reducible to the users' intention. While this *instrumentalist* view is vulnerable to objection, it seems to be the dominant perspective in the Islamic world. According to this account, technology is nothing but an instrument to help fulfil human goals. Subsequently, if the values attached to technology are merely instrumental, there would not be anything for scrutiny. All possible problems then arise from the way technology is *used* by individuals. But this intuition is far from convincing.

With the emergence of western philosophers reflecting upon technology, soon it turned out that technology is not an innocent tool. Rather, it is value-laden, and in this sense, it calls for evaluation on its own. Ellul, for instance, was one of the first authors who challenged the *value-neutrality thesis*, arguing that modern technologies had become 'autonomous' at the expense of the autonomy of human.[1] He also noticed that technology creates its own culture and subsequently local sub-cultures would be undermined.[2] Later, thinkers like Mumford and Marcuse came to illuminate other aspects of embedded values in technology.

But how values attached to technology can be evaluated? There seem to be four levels at which technology can be assessed, and we believe one can think of an Islamic approach with respect to each. At the first level, one may evaluate the very *idea* of technology without any account of concrete technologies. This view is best exemplified by Heidegger's approach, in that he calls into question technology's contribution to the inadequate revealing of the being. We will return to Heidegger's

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[1]Jacques Ellul, *The Technological Society* (New York: Vintage Books, 1964).

[2]Ibid.

conception of technology in a later section, and here it goes without saying that according to him technology promotes a particular meaning of the being which is highly contestable.

Alternatively, as a second possible approach, one can evaluate the faulty commonalities which all modern technologies share as to, say, promulgating a particular pattern of life. Borgmann for instance complains about the dominant pattern which governs all modern technologies, that is, a pattern which he calls 'device paradigm.'[3] Device paradigm grounds on one key factor; *availability*. Modern technologies, he argues, are intended to liberate civilians from all burdens by making everything available. Availability in turn is delivered, 'if [technology is] … instantaneous, ubiquitous, safe, and easy.'[4] Borgmann's idea implies that, thanks to modern technologies, everything is growingly turning into a *commodity* which is easily accessible. Such a pattern in turn diminishes the meaningful aspects of life. In the wake of technologies like microwaves and instant foods, for instance, we have lost the opportunity of preparing food in a family setting and sitting around the same table. Borgmann claims that modern technologies tend to impede such *focal* and meaningful activities.[5] The difference between the first and the second approach lies in the intuition that while the first method is *transcendental* and, in this sense, *apriori*, the second route is *aposteriori*. That is, the latter seems to be an abstraction and generalization of a particular facet inherent within all concrete technologies.

Next, one can also think of moral evaluation of *kinds* of technologies, rather than the idea of technology, or targeting all technologies at once. In this third sense of value assessment, any kind of technology is taken to be idiosyncratic if embodying value in its own way that is not necessarily shared by other technologies. For instance, many have argued that at least some technologies embody intrinsic (dis/) values.[6] The idea here is that such technologies significantly increase the likeliness of certain doings which clearly are (im/) moral. AK47 rifles, for example, seem unlikely to be used in fashions morally legitimate[7] and in this sense they are loaded with an inherent disvalue.

We can still move forward and conceive of a fourth level for evaluating technology, and that is, when the same technology is used differently in different contexts.[8] Communicative technologies,

[3]Albert Borgmann, *Technology and the Character of Contemporary Life* (Chicago: University of Chicago Press, 1984).

[4]Ibid., 41.

[5]Ibid.

[6]Michael Klenk, "How do Technological Artefacts Embody Moral Values?" *Philosophy and Technology* 34, (2021): 524-544; Van de Poel and Kroes, "Can Technology Embody Values?" in *The Moral Status of Technical Artifacts*, ed. Peter Kroes, (Springer, 2015); Peter-Paul Verbeek and Tollon, "Artifacts and Affordances: from Designed Properties to Possibilities for Action," *AI and Society*, https://doi.org/10.1007/s00146-021-01155.

[7]Ibo Van de Poel and Kroes, "Can Technology Embody Values?" in *The Moral Status of Technical Artifacts*, ed. Peter Kroes, (Springer, 2015).

[8]This characteristic of technology is called *multistability* by Don Ihde. It implies that technology has not only one stability or meaning, rather it can embody a multitude of stabilities or meanings. For more, see Ihde, Don Ihde, *Technology and the lifeworld: From Garden to Earth* (Indianapolis: Indiana University Press, 1990); Ihde, *Expanding Hermeneutics: Visualism in Science* (Evanston: Northwestern University Press, 1998; Ihde, "Forty Years in the Wilderness." In *Postphenomenology: A Critical Companion to Ihde*. edited by E. Selinger, (Albany: State University of New York Press, 2006), 267-290; Ihde, *Postphenomenology and Technoscience: The Peking University Lectures* (New York: SUNY Press, 2009); Ihde, *Husserl's Missing Technologies* (New York: Fordham University Press, 2016); Peter-Paul Verbeek, *What Things do: Philosophical Reflections on Technology, Agency, and Design* (Pennsylvania: Pennsylvania State University Press, 2005); Robert Rosenberger, Verbeek Peter-Paul, "A Field Guide to Postphenomenology," *Postphenomenological*

for instance, can be used for promoting empathy and peace, yet the same technologies can be coherently used for evil purposes as spreading hate discourse or fragmenting society.[9]

In this article, we will take for granted that first, technology is value-laden, and second, all four levels introduced above are relevant. We will not argue further for these two claims accordingly. In particular, we believe neither of these four levels can be ignored, as some of the contemporary scholars have discarded the first two approaches. Rather all levels, though open to amendments, need to be taken as supplementary and subsequently be explored on their own.

Against this backdrop, we would be seeking for an Islamic perspective of technology, and in particular the role of religion to mitigate the harms of technology. Even though we think our work after-some fine-tuning- might be applied to all levels introduced above, it would contribute predominantly to the evaluation of technology at the first level. To that purpose, we would ground our article in the work of a contemporary Islamic philosopher, Muhammad Hossein Tabātabā'ī (d.1981). He is arguably the most important Iranian philosopher after Mulla Sadra. We think his contribution, and in particular his theory of *iʿtibārīat* (roughly, mental constructions) as well as virtue approach to ethics, can be a basis upon which to build an Islamic approach to technology. According to the theory of *iʿtibārīat*, animals (including human beings), along with the capacity of perceiving the reality as it stands, that is, *brute facts*, are also able to generate certain perceptions which, although not originated from the external world, may create real effects. For instance, we might develop a collective intentionality to create a new and unprecedented notion like money. The latter, contrary to a tree, has not been out there awaiting to be discovered, rather we have brought about it as a *construct*. Importantly, it has real casual interactions with the world. In this sense, the theory of *iʿtibārīat*, we will argue, may pave the way to study technology that has been constructed to serve a purpose. We will have more to say about the theory of *iʿtibārīat* and its application later, but for now, we would like to talk briefly also about a further source of inspiration. This further source which has proven influential in Western thought, that is, Heidegger's contribution to the philosophy of technology. Though primarily concerned with metaphysics rather than technology *per se*, Heidegger had to explore technology to find out why existence, in the modern era, had revealed itself in a technological way. His insights contained novel subtleties with regard to the role of technology in our life. We will refer to his teachings to throw light on Tabātabā'i's views. Even though Heidegger's views came to be criticized by the next generation of philosophers of technology, especially by those belonging to the trend of the so-called empirical philosophy of technology,[10] as being sheerly transcendental, pessimistic, monolithic, generalizing and deterministic.[11] We believe Heidegger's core concern is still relevant. Furthermore, we will place his outlook in comparison to Tabātabā'i's and will find that the latter's views have the privilege to account for the former's pessimism towards technology.

The structure of the article is as follows. In the next Section, we will expose the theory of *iʿtibārīat*. We will not be able to unfold every aspect of it, however, and the reader will be invited to go through the original work for a thorough overview. In Section 3, we will be engaged with

Investigations: Essays on Human-Technology Relations, edited by Robert Rosenberger, Peter-Paul Verbeek, (London: Lexington Books, 2015), 9-41.

[9]e.g., Ehsan Arzroomchilar, "Techno-Radicalism; an Account of Islamic Radicalism in the Technology Era," *International Journal of Cyber Warfare and Terrorism*, 12, No., 1 (2022): 1-14, DOI: 10.4018/IJCWT.297858.

[10]Empirical philosophy of technology is an umbrella to cover all those authors whose concern is philosophizing about *concrete* technologies. For an overview, see Hans Achterhuis, *American Philosophy of Technology: The Empirical Turn* (Indiana University Press, 2001).

[11]For a critical evaluation of Heidegger's approach, see Peter-Paul Verbeek, *What Things do: Philosophical Reflections on Technology, Agency, and Design* (Pennsylvania: Pennsylvania State University Press, 2005).

Heidegger's objections to technology. Section 4 will be concerned with examining Tabātabā'i's prescription, which we believe hypothetically will be able to meet Heidegger's concerns. Section 5 will summarize the results of this study.

2. Theory of Iʿtibārīat

Tabātabā'i is a towering venerated Islamic thinker. Being a mystic, exegete, an authentic philosopher, and a commentator of Mulla Sadra's thought, has granted him a prominent standing. One of his novel contributions is the contrast between *haqiqi* and *iʿtibārī* (roughly, real and construction, respectively) where the former is associated with the perception of reality as it stands and the latter with mental constructs, whose effects nonetheless are external and real. His work seems to be the first systematic attempt to lay bare mental constructions in the history of Islamic philosophy. However, while his *Tafsir al-Mizan* (his voluminous interpretation of Qur'an) has been well-received, his insights into *iʿtibārīat* have remained underdeveloped.

Going through details of his theory is far beyond the purview of this writing, and the reader is invited to take a look at the original as well as secondary literature.[12] Therefore, we will unfold a fraction of his theory which is relevant to our current concern. *Iʿtibārīat*, according to him, are primarily in charge of satisfying human's (and in general animal's) basic needs. However, such an appetite may exceed in effect and go beyond the mere quenching the immediate and survival-driven needs, as will be discussed shortly. Yet, the idea remains the same for all types of *iʿtibārīat*, and that is, having been developed to serve fulfilling one's needs. Tabātabā'i introduces two kinds of *iʿtibārīat*; pre- and post-society *iʿtibārīat*.[13] The first category, as the label suggests, is associated with the individuals' needs, regardless of whether there exist any society or not. Perceiving the *necessity* of seeking food or shelter is of the kind of pre-society *iʿtibārīat*. Such a perception (i.e. the obligation of seeking for food and shelter) would operate even if there was no society around. The second category, in contrast, refers to those needs which arise within the context of a society. For instance, to keep the society functional, we need to exchange our commodities; therefore, we come to devise money to facilitate this process. Even though Tabātabā'i acknowledges that post-society *iʿtibārīat* build on pre-society ones (i.e. the latter are the condition for the existence of the former), yet there is a crucial difference here; the post-society *iʿtibārīat* targets the survival of society on the whole; whereas, the aim of the pre-society *iʿtibārīat* is survival of individuals.[14] Importantly, post-society *iʿtibārīat* come along because we can develop collective intentionality.[15]

[12]E.g. *Usul-i Falsafa va Ravish-i Ri'alizm* and *Al-Mizan* as first-hand sources and Hamid Algar, "Ijtihād and Allāma Sayyid Muḥammad Ḥusayn Ṭabāṭabāʾī: Philosopher, Exegete, and Gnostic," https://www.al-islam.org/allamah-muhammad-husayn-tabatabai-philosopher-exegete-and-gnostic-hamid-algar/allamah-muhammad; Louis Medoff, *Ijtihād and Renewal in Qurʾānic Hermeneutics: An Analysis of Muḥammad Ḥusayn Ṭabāṭabā'ī's al-Mīzān fī tafsīr al-Qurʾān* (Berkeley: University of California, 2007).

[13]Muhammad Husayn Tabātabā'i, *Usul-i Falsafa va Ravish-i Ri'alizm* (Tehran: Sadra, 1391 SH), 2/185.

[14]Ibid., 202.

[15]The reader might identify an echo of some of the views developed by western philosophers. Among others, John Searle seems to be taking a similar approach to the mental constructions. Even some examples they take, like money, are the same. Given that Tabātabā'i was not familiar with the analytic tradition and more importantly his ideas usually had developed prior to those of Searle, this might strike readers as interesting. To see more, look Searle's work: John Searle, *Intentionality* (New York: Cambridge University Press, 1983); *Mind, Language and Society* (New York: Basic Books, 1999).

Even though Tabātabā'i discusses different types of pre- and post-society *iʿtibārīat* we are not going to unpack all of them here.[16] Instead, we are just concerned with one particular type of pre-society *iʿtibār* upon which one can develop an approach to technology: the *iʿtibār* of utilization.[17] According to the *iʿtibār* of utilization, every animal utilizes the environment, nature, and everything around, along the way of struggling for its existence, i.e. insuring self-preservation. In this sense, all animals tend to *instrumentalize* their surroundings to guarantee their survival. There is a crucial difference though, Tabātabā'i notes, between humans and animals with regard to this particular *iʿtibār*. That is, human beings' utilization of the surroundings goes far beyond realizing the immediate and biological needs, and applies equally where there are advanced desires at stake. After all, human individuals tend to adorn their dwellings with flowers to make homes more pleasant places to live, a desire that does not look like carrying any –at least direct- survival merit.

Crucially, the list of things humans deploy for consolidation also includes other humans.[18] Tabātabā'i argues that exploiting things and humans around, far from being a symptom of perversion or abnormality, is a normal behavior, given that it stems from the very nature of human beings (animals). He even claims that should there were no *iʿtibār* of utilization, no society would be brought into existence and in this sense the *iʿtibār* of utilization serves as a ground upon which society is supposed to emerge.[19] The idea is that, all individuals, for their self-preservation, try to take advantage of other individuals. In time, however, they would realize that to withstand difficulties, not only they need to utilize others in their interest, but also, they have to respond, in return, to the needs of other individuals. This is the dynamic behind taking shape of societies, Tabātabā'i notes. To be brief, according to the *iʿtibār* of utilization, the essence of humanity implies taking advantage of everything in the surroundings in accordance with one's own preferences. Nonetheless, such observations should not be taken as legitimizing a selfish attitude towards other civilians, as will be elaborated in later sections. We will return to the Tabātabā'i"s treatment, but for now we turn to Heidegger's account of technology.

3. Heidegger's Account of Technology

In his seminal article, Heidegger (1977) extensively examines technology. There, he first rejects taking technology both as 'a means to an end' and as 'human activity', calling them 'instrumental and anthropological definition of technology' respectively.[20] He then claims that technology is 'a way of revealing.'[21] But what this revealing is supposed to mean? According to Heidegger, reality does not stand always in a same relationship to human beings. Rather, all kinds of relations are provisional. In each epoch, reality might reveal itself differently. Reality, according to Heidegger, is nothing but emerging out of concealment into unconcealment This is what Heidegger means by the term revealing; coming into view in a certain way.

Heidegger then claims that technology is the dominant 'way of revealing reality' in the modern era, as he writes 'technology is a mode of revealing. Technology comes to presence in the realm

[16]Tabātabā'i enumerates necessity, goodness and evil, differentiation of more and less difficult, and utilization as pre-society *iʿtibārīat* and possession, language, and headship as post-society *iʿtibārīat*.

[17]Muhammad Husayn Tabātabā'i, *Usul-i Falsafa va Ravish-i Riʾalizm* (Tehran: Sadra, 1391 SH), 2/205.

[18]Ibid., 206.

[19]Ibid., 208.

[20]Martin Heidegger, "The Question Concerning Technology," in *The Question Concerning Technology and Other Essays*, trans. W. Lovitt (New York: Harper and Row, 1977), 3-36.

[21]Ibid., 12.

where revealing and unconcealment take place, where … truth, happens.'[22] Technology thus is a pattern through which reality shows itself, a medium for structuring the reality, shaping the reality in a specific style.

Importantly, once a certain kind of revealing occurs, all alternative kinds of disclosure would become latent accordingly. That is, if the modern way of disclosure happens through technology, we would not have access to other possible meanings of the reality. We, modern humans, are doomed, as it were, to understand reality in terms of technology. According to Heidegger, there is a particular '*way of unconcealment'* that 'holds sway' in every epoch, and that determines the structure of revealing the reality. In the contemporary world, today technology (as such) is the thing that determines how reality should be revealed.

However, for Heidegger, the dominant technological way of revealing reality is not simply one possible way among others; rather it is idiosyncratic. Unfolding the reality in this manner involves a specific character where human beings come to 'set upon' or 'challenge' what they bring forth as the reality. For our technologically mediated mentality, reality is as though a *standing-reserve* of which we may exploit unconstrainedly.[23] The particular way of revealing the reality, where the latter comes to be disclosed as an aggregate of raw materials, is what Heidegger refers to as *Gestell*.[24] *Gestell* in this sense is the specific way of disclosure of reality as standing-reserve. Crucially, in the *Gestell* lies the *essence* of technology, as Heidegger notes.[25] Pointing to the Rhine river, he speaks of the hydroelectric plant that is installed on it where,

it sets the Rhine to supplying its hydraulic pressure, which then sets the turbines turning…[here] the Rhine itself appears as something at our command. The hydroelectric plant is not built into the Rhine River as was the old wooden bridge that joined bank with bank for hundreds of years. Rather the river is dammed up into the power plant. What the river is now, namely, a water power supplier, derives from out of the essence of the power station. In order that we may even remotely consider the monstrousness that reigns here, let us ponder for a moment the contrast that speaks out of the two titles, 'The Rhine' as dammed up into the power works, and 'The Rhine' as uttered out of the art work, in Holderlin's hymn by that name. But it will be replied, the Rhine is still a river in the landscape, is it not? Perhaps. But how? In no other way than as an object on call for inspection by a tour group ordered there by the vacation industry.[26]

The point Heidegger seems to be making is that Rhine initially had to be revealed as a standing-reserve to us (*Bestand*[27] as the original German word), and only later, we could construct the plant over it. That is, we needed a specific manner of revealing the reality first as a precondition to be able to build a plant over the river afterwards. Concrete technologies thus are affects themselves rather than causes. Instantiation of technologies are the effect of something deeper, which is *Gestell*. This implies, creating concrete technologies preceded by a particular understanding of the world, namely world as a huge resource containing raw materials. As Heidegger notes, such a meaning of the Rhine radically diverges from that of Holderlin's age.

Now, the technological way of revealing reality, namely *Gestell*, is not innocent, Heidegger warns, calling it a 'danger' accordingly.[28] But what is so worrisome about technology? Heidegger,

[22]Ibid., 14.
[23]Ibid., 19.
[24]usually translated as *enframing* (Noted by the translator, w. Lovitt).
[25]Ibid.
[26]Ibid., 16.
[27]*Bestand* ordinarily denotes a store or supply as 'standing by' (noted by the translator of work, W. Lovitt).
[28]Ibid.

in general, takes any form of revealing –technological or otherwise- to be a danger, for, "in whatever way the destining of revealing may hold sway, the unconcealment in which everything that is shows itself at any given time harbours the danger that man may quail at the unconcealed and may misinterpret it."[29]

Put simply, Heidegger believes that any fashion of revealing can cause forgetting about the reality of the being. This is ~~so~~ because any particular manner of disclosure is, in principle, amounts to inhibiting other possible meanings of the being to surface.

But Heidegger claims that *Gestell* is not like any other sort of unconcealment to be simply a danger, rather, its danger surpasses all other types of revealing. Thus, he considers *Gestell* to be the 'supreme danger.'[30] He provides two reasons why he thinks the current technological conception of reality is the greatest danger. First, taking everything in the nature as standing–reserve would give rise ultimately to the situation where human 'himself will have to be taken as standing-reserve'.[31] It implies that such an instrumentalist understanding of the reality soon would spread and humans subsequently would be relegated to tools for fulfilling certain purposes. To put simply, we would tend to treat other individuals in an instrumental way in light of the current technological conception of the being. The second reason is that if such a meaning prevails, it subsequently 'drives out every other possibility of revealing'.[32] That is, if a technological conception of reality becomes dominant, it obstructs accordingly all other possibilities.

While insightful in many respects, Heidegger's conceptualization of technology suffers from several shortcomings. It is, above all, too deterministic and pessimistic, as said earlier. On his account, there is no way out of such a dark fate. We live through an age where the reality is already disclosed in a technological framing, and there is no room seemingly to get out of it. Moreover, his approach seems monolithic and insensitive to the differences between concrete technologies. As Ihde notes, such an analysis is flawed 'since it could not discriminate between the results of playing a musical instrument … and the process of genetic manipulation.'[33]

In the next section, we will bring the relevant pieces of Tabātabā'i's account of *iʿtibārīat* into view to see how his account may mitigate the gloomy picture sketched by Heidegger.

4. Tabātabā'i's Legacy for an Islamic Ethics of Technology

As elaborated previously, every modification we make in our surroundings has resonance with the *iʿtibār* of utilization, according to Tabātabā'i. That is to say, we tend to take advantage of our neighbourhood because we would like to satisfy our (immediate or advanced) wishes.

Furthermore, if the idea of technology is associated with any modification of the environment one makes in order to fulfil her desires then it follows that the principle of utilization may cast light on the creation of technology. As a result, Tabātabā'i's insight might provide a foundation to address Heidegger's concern. However, the commonalities are not so straightforward. To begin with, Tabataba'i and Heidegger depart from diverging points and in this sense, they might not be able to dialogue with one another. In particular, Tabātabā'i talks about human faculty/tendency while

[29]Ibid., 26.
[30]Ibid., 27.
[31]Ibid.
[32]Ibid.
[33]Don Ihde, "Forty Years in the Wilderness" In *Postphenomenology: A Critical Companion to Ihde*, edited by E. Selinger (Albany: State University of New York Press, 2006), 267-290. Ihde also takes issue with generalizing the idea that technology drives from, and fosters in turn, a culture of dominance. Music instruments, for example, don't follow this pattern according to him [Don Ihde, *Technology and the lifeworld: From Garden to Earth* (Indianapolis: Indiana University Press, 1990)].

Heidegger deals with human perception/mentality influenced by modern technologies. Therefore, Tabataba'i's idea might not directly address Heidegger's problem. Nonetheless, we believe Tabataba'i's view can be generally adopted to answer the modern problem of technology. For one thing, Tabātabā'i is quite clear to address technology, as he refers to various artefacts time and again to exemplify the application of the principle of utilization. For another, people don't have to depart necessarily from a same point if they wish to dialogue. Rather, that would be sufficient just to address the same concern, the condition which is already met in this case. It seems then that Tabātabā'i's concern at some point meet that of Heidegger.

A further issue, though not that problematic, is that there are several points of disagreement between them. While for Tabātabā'I, the principle of utilization stems from the nature of human beings and in this way, it might follow that the business of tool-creating is an inevitable implication of being human; whereas, for Heidegger technological outlook of modern man is peculiar, and nothing similar to that of tool-making in antiquity. We leave open whether modern technologies are radically different from ancient tools. Whatever the answer will be, the basic idea remains the same, and that is, human beings are willing to take advantage of their surroundings as much as possible, and technology (modern or otherwise) is the full-blown embodiment of such an inclination.

Heidegger, moreover, seems to be worried about the danger of the current technological outlook, whereas Tabātabā'i takes it to be natural. Nevertheless, as we will explain shortly, Tabātabā'i, too, identifies harm in the excessive functionalist attitude in case it is not harnessed. In fact, here the difference lies in the fact that for Heidegger, as far as modern technologies are concerned, nothing is normal, and technological worldview is substantially detrimental, whereas for Tabātabā'i such an attitude is not harm in itself, but overindulgence in it may turn deleterious. Bellow, we will bring into view Tabātabā'i's prescription for taming the rampant appetite for utilization of the surroundings. But prior to that, let us throw light on their different assessment specifically into utilization of human fellows.

Heidegger calls technological unfolding of the being as the 'greatest danger' on the basis that it might eventually lead to treating other individuals in an instrumental way. Here not only the material environment might be affected, human dignity too might be undermined in the wake of the current technological attitude. Tabātabā'i, in contrast, does not identify any intrinsic harm in utilizing other individuals and even goes beyond to take the faculty of utilization as a God-given blessing in the way of facilitation of our path to the perfection, as he writes:

God has provided us with a particular kind of existence where we are able to … utilize everything … as we can see how tricky ways we use [to bring about] our own creations [as artifacts] … and this is what is meant by Quranic verses like 'It is He who created for you all that is in the earth'[34] and 'He has disposed for you[r benefit] whatever in the heavens is and whatever on the earth is; all is from Him'[35], and some other verses which imply that [everything] is tamed for humans … And it is an obligation for humans to utilize whatever is relevant for their perfection [including other humans].[36]

In another passage, he stresses that utilization of other humans is quite consistent with the general pattern that begins from utilizing simple objects and ends up with other humans along a continuum; [human being] starts from simple matters to create tools, next he would be able to exploit more complex materials using these simple tools…. Here we can see making knife and axe, needles for tailoring, containers for liquids, ladder for climbing up and all other artifacts. Then he would

[34]Al-Baqarah 2:29.

[35]Al-Jathiyah 45:13.

[36]Muhammad Husayn Tabātabā'ī, *Al-Mizan*, trans. Mohammad Baqir Moosavi (Qom: Jamee Modaresine Hozaye Elmiye, 1374 SH), v 2, 172.

make sophisticated tools for more advanced aims, and thus he would start utilizing plants to make food, clothing and shelter out of them, then animals … and in the end utilizing human race, and tries accordingly to put the latter into use in whatever way possible.[37]

Nonetheless, all this does not warrant utilizing the surroundings in an unbridled way. Rather, it needs limitation which is set by religion. Tabātabā'i, like Heidegger, feels the potential threat in utilization of other human individuals, and this problem eventually pushes him to political discussions. While applying the *iʿtibār* of utilization to other human individuals, Tabātabā'i suggested that his preferred political system where justice, as the most crucial political element, should be institutionalized to guarantee all individuals' rights. Here he claims that only a religion-based ruling can harness the endless whim of utilization of others. We don't aim to go into the details of his treatment of political philosophy, but as far as it resonates with the current discussion, we would like to bring into relief his view on the role of religion in constraining the desire for utilization.[38]

Tabātabā'i, as elaborated, believes that the very emergence of societies is indebted to the faculty of utilization. Such a capacity, however, needs to be kept below a threshold if the society wishes to survive. Moreover, the faculty of utilization should be exercised in a reciprocal fashion. To some extent, this usually happens and civilians would learn that for their own survival they have to allow others to utilize them in return. That is, in time, individuals would acquire an understanding of values like justice and reciprocity. Yet, in effect, Tabātabā'i claims, no society can exhibit a full-blown degree of justice. And exactly here lies the rationale behind the need for prophecy. Prophets are required to ascertain justice across society. Simply put, if there was no prophet there would not arise any external constraint in the way of instrumentalizing other individuals. In his words:

Human beings, based on their nature, are exploiters. This innate faculty leads them to establish a society, yet at the very same time leads them to corruption and disagreement…. As a result, there are two basic ways for dissolving the challenges; first, exercising other capacities of their own innate to solve problems and second, something outside the human beings' innate. The first way is insufficient given that it has been the very cause of the challenges in the first place, and the only way out of such challenges, is appealing to something external, and that is through God's [ruling] which we interpret as prophecy or revelation.[39]

In sum, Tabātabā'i does not seem to be having any qualm about the mediation of humans' whim of utilization, contrary to Heidegger. He even bases human's life, in both its private and societal sphere, on that very faculty, as explained above. Yet, he warns against overindulgence in it where religion's edict is not taken into account. In this sense, what is taken by Heidegger to be a destiny or fate of humanity, that is, to be stuck in a technological revealing of the being, is not anything worrisome on the account of Tabātabā'i, albeit in case there is an external constraint upon humans. Put differently, Heideggerian *Gestell*, is nothing radically new and unprecedented for Tabātabā'i. Rather, it is just excessive employment of a tendency which, in fact, has always been at work, that is, the inclination of utilizing the surroundings. Crucially, the context for the emergence of such an extravagance in modern era, according to Tabātabā'i, is a secularized world where religious decrees are forgotten. The mindset of the modern man has lost the sense of respect for the surroundings at the cost of the dominance of *Gestell*. *Gestell* in this sense is nothing but an excessive exercise of the faculty of utilization in a secularized world where external limiting forces are discarded.

[37] Ibid., 162.

[38] For an extensive treatment of Tabātabā'i's views on politics, see Olamaiekopaie and Arzroomchilar (2022).

[39] Ibid., 131.

Before going any further, we would like to briefly highlight a point which so far was implicit. Although Tabātabā'i seems to be concerned predominantly with the utilization of human beings, his schema is applicable also to all other beings, e.g., animals, natural resources or so. The evidence here is that for him there is no radical difference between humans, animal and nature as far as the innate capacity of utilization is concerned.[40]

So far, Tabātabā'i has been formulating his ideas in an abstract sense through stressing the role of religion, in general, to tame the faculty of utilization. Yet, he specifies his remarks further. He deals extensively with moral facets of human life and their bearings upon religion. His favored approach to ethics seems to be that of the virtue tradition. Even though he does not make it explicit, his occasional reference to the Hellenistic tradition makes him a clear-cut exponent of virtue ethics. One caveat, however, is that he distances himself of embracing a full-fledged Hellenistic virtue ethics and tries to orient the Aristotelian tradition into an Islamic taste. He takes issue with the way the notion of virtue has traditionally been used as being too this-worldly.[41] On such a secular virtue morality, Tabātabā'i objects, virtue is based merely on the public's appraisal and the societal impacts of one's doings. In a divine-based virtue ethics, in contrast, acts are evaluated against God's verdicts. He also distances himself from a further type of ethics according to which virtuous character is going to be cultivated through doings which contribute exclusively to the afterlife, the thought which he calls 'prophecy school.'[42] Here his objection is that there is a lack of attention to internalizing virtues and act is motivated solely by the fear of Hell or thirst of Heaven. In contrast, Prophet Mohammad (*SAW*), whom Tabātabā'i praises, has introduced a kind of divine-based virtue morality upon which all doings are sprung from human's own volition. The only legitimate ground for evaluating human acts according to such an account is the degree to which they are in accordance with God's directives. This way, on Tabātabā'i's view, Islamic virtue ethics, aligns human's will with that of God through internalizing virtues.

In spite of his objection to the Aristotelian conception of virtue, Tabātabā'i embraces the *golden mean* rule, common among various virtue traditions, stressing that we need to keep balance within our three faculties of soul, namely, appetitive, spirited, and rational, which govern soul's specific acts. That is, we need to be observant of our inner state and keep our faculties away from extremes. Notably, he attributes such an underpinning of morals to a number of Qur'ānic verses, and most

[40]Nevertheless, he seems to be sometimes explicitly refereeing to non-human beings too. For instance, he speaks about flood, drought and the like, following two verses below;

'Corruption has appeared in land and sea because of the doings of the people's hands, that He may make them taste something of what they have done so that they may come back.' Al-Rūm 30: 41,

'If the people of the towns had been faithful and God-wary, we would have opened to them blessings from the heaven and the earth. But they denied; so, we seized them because of what they used to earn.' Al-A'rāf 7: 96.

He also explains how human beings have the obligation to make the world a pleasant place to live (thus should obviously not ruin it through greedy exploitation) when accounting for the following verse:

'He brought you forth from the earth and made it your habitation. So, plead with Him for forgiveness, then turn to Him penitently. My Lord is indeed nearmost [and] responsive.' Al-Hūd 11:61.

[41]Muhammad Husayn Tabātabā'ī, *Al-Mizān*, trans. Mohammad Baqir Moosavi (Qom: Jamee Modaresine Hozaye Elmiye, 1374 SH), v 2, 356.

[42]Ibid., 358.

importantly to the one which describes the Muslim society as the 'Middle Nation.'[43] In this sense, he takes the golden mean rule to square inherently with the Islamic climate. We would not go into details of his account here, and only highlight its implications for an approach to technology.

To establish an Islamic ethics of technology, one can conceive of the golden mean as a guiding principle. As explained earlier, Tabātabā'i does not take the faculty of utilization as such, out of which technology is originated, to be a curse. Rather, he calls for a balance between two extremes of the excessive operationalization of utilization on the one hand, and severe suppression of the appetite on the other.

Put simply, an Islamic approach to technology would blame on the one hand the unbridled market-based technology culture where utilization of the surroundings and subsequently instrumentalizing whatever conceivable is taken to be legitimate. Such an attitude could not be counted as a virtuous behavior provided that creation of technology is not here grounded on sincere needs, rather it seems to be based on greed.

On the other hand, however, it does not seem so wise to suppress our innate faculty of utilization and put technology aside altogether. Such a hostile approach to technology seems to be standing on the other extreme, which Tabātabā'i's' golden mean denounces. Technology has stemmed from humans' essential faculties, and as Tabātabā'i enunciates, taking advantage of the environment *per se*, is not evil at all. It only needs to be harnessed by a God-driven, virtuous character. Not only the idea of leaving out technology does not seem wise on this account, but it is not possible at all. The reason, as discussed, is that utilization in general, and tool-making ability in particular, constitutes as the very basis of our survival.

5. Conclusion

Technology is neither neutral nor being used merely as an instrument. Rather, in all its aspects, namely design, implementation, and use, technology is value-laden. Cultures with varying systems of value then might not be standing in an equal footing to a given technology. Some technologies are more aligned with one's values, whereas others might not be. In this sense, we would need a moral framework-to evaluate technologies from a moral point of view. There may be four levels of values, moreover, associated with technology, as we've elaborated in this study. However, the current work concerns only with one of these levels, that is, taking account of the very idea of technology as utilization of the surroundings in our interest from an Islamic point of view. Further Research is required to take into account the other dimensions.

In this article, we suggested a particular context for the evaluation of technology. However, we admit our account is far from perfect yet, and can be thought of only as the starting point. Drawing upon the theory of *iʿtibārīat* developed by Tabātabā'i, a highly respected Muslim philosopher, we have explored an Islamic approach to technology. We have brought into view some of the worrisome aspects of the current technological outlook through exposing Heidegger's account. Even though Heidegger's approach has been subject to criticism on several fronts, we believe the main idea of his insights remains relevant. According to him, a technological conception of the being where world is perceived (merely) as standing-reserve is unhealthy, the pattern which he calls *Gestell*.

As elaborated, whereas Heidegger's account seems too gloomy and deterministic, Tabātabā'i takes the tendency of instrumentalization of the surroundings as necessary for forming a social life. The threat, however, arises when humans begin deploying the surroundings in an excessive and

[43] Al-Baqarah 2:143; He also draws from further Qur'ānic evidence as with the word *Hanīf* (true faith) in the following verse, "which he takes to be refereeing to the virtue of *moderation."* [Muhammad Husayn Tabātabā'i, *Al-Mizan,* trans. Mohammad Baqir Moosavi (Qom: Jamee Modaresine Hozaye Elmiye, 1374 SH), v 20, 575].

unbridled way conductive ultimately to faulty consequences as loss of respect for other humans, growing environmental degradation, and resource depletion. Here, everything is being put in an instrumental way while there is no constraint to keep the balance. In fact, Heideggerian *Gestell*, seems to be an excessive exercise of the faculty of utilization in a secularized world where all external limitations (i.e. religion) are discarded, according to Tabātabā'i. We believe the current market-motivated technology culture, where greed sometimes surpasses needs, is, more than ever, awaiting an ethical framework. Islamic tradition of mysticism, by its central notion of virtue, has a great potential, we think, to be explored for filling the gaps within the current technological culture. To that purpose, we tried to provide a draft of an Islamic approach to technology where the notion of virtue played a prominent role.

Lastly, by this article, we have taken a stance against three different approaches to technology within the Islamic world. The first trend, which seems to be the dominant one, subscribes to the idea of neutrality-thesis of technology. On this view, all values associated with technology can be exhaustively translated into the intentions of users. Therefore, technology is taken here to bear merely instrumental value. The second attitude, is those anti-technology ideological minds that tend to deny the idea of technology altogether. The latter trend seems to be the least popular line at the moment. And the last trend with which we took issue encompasses all those attempts which are being made to establish a *Sharīah*-oriented approach to technology. Technology is not simply the matter of *Halal* or *Haram* and in this sense cannot be addressed through methods common in *Fiqh* or *Sharī'ah* (Islamic law). Rather, values associated with technology are highly situational and contextual, and subsequently quite opaque, and this requires a call for deeper treatments. We need a moral framework to evaluate technology which is sensitive to the context, i.e. a practical wisdom that can cultivate virtuous personalities rather than generating rule-based codes of conduct.

Bibliography

Achterhuis, Hans. *American Philosophy of Technology: The Empirical Turn*. Bloomington: Indiana University Press, 2001.

Arzroomchilar, Ehsan. "Techno-Radicalism; an Account of Islamic Radicalism in the Technology Era". *International Journal of Cyber Warfare and Terrorism (IJCWT)*. 12, (1) (2022), DOI: 10.4018/IJCWT.297858

Borgmann, Albert. *Technology and the Character of Contemporary Life*. Chicago: University of Chicago Press, 1984.

Ellul, Jacques. *The Technological Society*. New York: Vintage Books, 1964.

Heidegger, Martin. "The Question Concerning Technology." In *The Question Concerning Technology and Other Essays*, trans. W. Lovitt, 3-36. New York: Harper & Row, 1977.

Ihde, Don. *Technology and the lifeworld: From Garden to Earth*. Indianapolis: Indiana University Press, 1990.

___. *Expanding Hermeneutics: Visualism in Science*. Evanston: Northwestern University Press, 1998.

___. "Forty Years in the Wilderness." In *Postphenomenology: A Critical Companion to Ihde*. edited by E. Selinger, 267–290. Albany: State University of New York Press, 2006.

___. *Postphenomenology and Technoscience: The Peking University lectures*. New York: SUNY Press, 2009.

___. *Husserl's Missing Technologies.* New York: Fordham University Press, 2016.

Klenk, Michael. "How do Technological Artefacts Embody Moral Values?" *Philosophy and Technology* 34, (2021): 524-544. https:// doi. org/ 10. 1007/ s13347- 020- 00401-y.

Medoff, Louis. *Ijtihād and Renewal in Qurʾānic Hermeneutics: An Analysis of Muḥammad Ḥusayn Ṭabāṭabāʾī's al-Mīzān fī tafsīr al-Qurʾān*. Berkeley: University of California, 2007.

Olamaiekopaie, M., E. Arzroomchilar. "Tabātabā'i: Theory of Iʿtibāriyyāt and His Political Philosophy." *Acta Fakulty filozofické Západočeské univerzity v Plzni / West Bohemian Review of Social Sciences and Humanities* 14 (1), (2022): 21-36.

Rosenberger, Robert., Peter-Paul Verbeek. "A Field Guide to Postphenomenology." *Postphenomenological Investigations: Essays on Human-Technology Relations*, edited by Robert Rosenberger, Peter-Paul Verbeek, 9–41. London: Lexington Books, 2015.

Searle, John. *Intentionality*. New York: Cambridge University Press, 1983.

___. *Mind, Language and Society*. New York: Basic Books, 1999.

Tabātabā'i, Muhammad Husayn. *Al-Mizān*, trans. Mohammad Baqir Moosavi. Qom: Jamee Modaresine Hozaye Elmiye, 1374 SH.

___. *Risālat al-Walāya*, Beirut: Dar-al-taaref al-matbou't, 1407 AH.

___. *al-Rasāʾil al-tawḥidiyya*, Qom: Muʾassasat al-nashr al-islami, 1373 SH.

___. *Majmūʿih-yi rasāʾil*, ed. Sheikh Sabah al-Rabi'i, Qom: Baqiat, 1428 AH.

___. *Usul-i Falsafa va Ravish-i Riʾalizm*. Tehran: Sadra, 1391 SH.

___. *Shīʿite Islam*. State university of New York Press, 1975.

Tollon, Fabio. "Artifacts and Affordances: from Designed Properties to Possibilities for Action." *AI and Society* (2021). https:// doi. org/ 10. 1007/ s00146- 021- 01155-7.

Van de Poel, Ibo., and Peter Kroes. "Can Technology Embody Values?" *The Moral Status of Technical Artifacts*, edited by Peter Kroes, Peter-Paul Verbeek. Netherlands: Springer, 2014.

Verbeek, Peter-Paul. *What Things do: Philosophical Reflections on Technology, Agency, and Design*. Pennsylvania: Pennsylvania State University Press, 2005.